PLURIPOTENT MAMMALIAN CELLS

ABSTRACT OF THE DISCLOSURE

The invention relates to a method of making pluripotent stem cells that does not involve the formation of early preimplantation embryos or fetal tissue. The method has general utility in the production of pluripotent stem cells from many mammalian species but has particular application in man where pluripotent stem cell production can be customized to particular human individual. The method involves the fusion of donor somatic or stem cells (or their karyoplasts) with cytoplasmic, membrane-delimited fragments of mammalian oocytes or zygotes. After the initial genomic reprogramming occurs, the cells can proliferate and thus multiply in vitro yielding a large number of autologous cells for cell therapy application. The result of this process is a cell population genomically identical to the somatic, differentiated cells derived from an individual patient. However, these cells are pluripotent in that upon application of specific growth factors, the cells are capable of differentiating into specific cell types as required by the sought clinical indication.